

REMARKS:

Status

Claims 1, 4 to 9, 11 to 14, 17 to 21, 23 to 25, 28 to 31, and 33 to 35 are pending. Claims 1, 4, 14, 17, 19, 25 and 28 have been amended herein. Claims 1, 9, 14, 21, 25, 31 and 35 are the independent claims. Reconsideration and further examination are respectfully requested.

Amendment to the Specification

The incorporation by reference in the application has been amended to update the identification of the incorporated document and to correct a typographical error.

Withdrawal of Previous Arguments

Applicant hereby withdraws all previous arguments made in this case as moot. In view of the final Office Action, these arguments have not persuaded the Examiner and are therefore immaterial to the disposition of the case.

Section 102 Rejection

The Office Action stated that claims 1, 4 to 8, 11 to 14, 17 to 20, 23 to 25, 28 to 30, and 33 to 35 were rejected under 35 U.S.C. § 103(a) over U.S. Patent Pub. No. 2001/0044807 (Kleiman), which has now issued as U.S. Patent No. 6,604,118. However, this rejection was under the heading “Claim Rejections – 35 USC § 102” and followed a quotation

from § 102(e). Therefore, Applicant is proceeding on the basis that this was a rejection under § 102(e).

Claims 1, 4 to 8, and 11 to 13: Independent claim 1 has been amended to include the features of the previous version of dependent claim 4. Claim 1 now reads as follows:

1. A method of propagating data, comprising:
mirroring the data from a first filer to a second filer; and
mirroring the data from the second filer to a third filer;
wherein snapshots are used in mirroring the data, the data is
organized in one or more volumes on the filers, one or more of the
volumes are mirrored, and the first filer uses softlocks to mark snapshots
needed for mirroring volumes from the first filer;
wherein deletion of a snapshot marked with a softlock is prevented.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 1, at least with respect to the feature that “deletion of a snapshot marked with a softlock is prevented.”

In the rejection of claim 4, paragraph [0043] of Kleiman was cited for teaching prevention of deletion of a snapshot marked with a softlock. The text of paragraph [0043] is reproduced below:

Moreover, when the file system is backed-up, restored, or otherwise copied or transferred, the blockmap within the file system is as part of the same operation itself also backed-up, restored, or otherwise copied or transferred. Thus, operations on the file system inherently include preserving snapshots.

Applicant does not see any mention in this text of preventing deletion of snapshots. For example, Applicant does not see any mention of preserving snapshots in the face of attempts to

delete those snapshots. Rather, the text merely mentions that “operations on the file system inherently include preserving snapshots.”

In this regard, footnote 1 on page 3 of the Office Action stated that the “Examiner interprets the steps of saving copied data as preventing the deletion of data.” Applicant respectfully submits that these two operations are entirely different.

Applicant’s position can be illustrated through a simple experiment using the Windows operating system: First, mark a file as “read only” using the file properties tool. This step prevents deletion of the file. Second, create a copy of the file. This step is equivalent to “saving copied data.” Third, uncheck the “read only” mark for the original file. Now, the original file can be deleted, even though a copy of the file is present. At this point, the file has been deleted even though a copy of the file has been saved. Therefore, saving a copy of a file (or other data) is different from preventing deletion of that file (or other data). Applicant submits that similar reasoning applies to saving a copy of a snapshot and deleting that snapshot.

Applicant further notes that Kleiman does not discuss deletion of entire snapshots, let alone prevention of such deletion. In fact, the words “delete” and “deletion” do not even appear in Kleiman.

Kleiman does discuss “releasing” snapshots in paragraph [0157], which is reproduced below:

[0157] For regular snapshots 210, the file server 110 does not reuse the storage blocks 115 in the snapshot 210 until the snapshot 210 is released. Even if the storage blocks 115 in the snapshot 210 are no longer part of the active file system, the file server 110 retains them without change. Until

released, each regular snapshot 210 preserves a consistent file system 114 that can be accessed at a later time.

Applicant respectfully points out that this text places no conditions on releasing snapshots. For example, no mention is made of checking for a softlock or other indicator before releasing a snapshot.

In view of the foregoing, Kleiman is not seen to disclose claim 1's feature that "deletion of a snapshot marked with a softlock is prevented." Reconsideration and withdrawal are therefore respectfully requested of the § 102(c) rejection of claim 1 and its dependent claims 4 to 8 and 11 to 13, as is allowance of those claims.

Claims 14, 17 to 20, 23 and 24: Independent claim 14 has been amended to include the features of the previous version of dependent claim 17. Claim 14 now reads as follows:

14. A memory storing information including instructions, the instructions for propagating data, the instructions comprising mirroring the data from a first filer to a second filer for mirroring to a third filer;
wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, one or more of the volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer; and
wherein the instructions further comprise preventing deletion of a snapshot marked with a softlock.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 14, at least with respect to the feature of "preventing deletion of a snapshot marked with a softlock." As discussed at length above, Kleiman is not seen to teach this feature.

Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 14 and its dependent claims 17 to 20, 23 and 24, as is allowance of those claims.

Claims 25, 28 to 30, 33 and 34: has been amended to include the features of the previous version of dependent claim 28. Claim 25 now reads as follows:

25. A filer that mirrors data to one or more other filers, comprising:
a file system that stores the data;
a processor; and
a memory storing instructions for the processor, the instructions comprising mirroring the data from the filer to a second filer for mirroring to a third filer, wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, one or more of the volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer;
wherein the instructions further comprise preventing deletion of a snapshot marked with a softlock.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 25, at least with respect to the feature of “preventing deletion of a snapshot marked with a softlock.” As discussed at length above, Kleiman is not seen to teach this feature.

Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 25 and its dependent claims 28 to 30, 33 and 34, as is allowance of those claims.

Claim 35: Original independent claim 35 reads as follows:

35. Data stored in a memory of a filer, the filer mirroring one or more volumes to a second filer for mirroring to a third filer, the data comprising one or more softlocks that indicate what volumes are mirrored to the second filer and the third filer, whereby deletion of snapshots associated with those volumes is prevented.

The applied reference is not seen to disclose the foregoing features of claim 35, at least with respect to data stored in a filer including “one or more softlocks that indicate what volumes are mirrored [from the filer] to the second filer and the third filer, whereby deletion of snapshots associated with those volumes is prevented.” Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 35, as is allowance of that claim.

Section 103 Rejection

Claims 9, 21 and 31 were rejected under 35 U.S.C. § 103(a) over Kleiman in view of U.S. Patent No. 5,852,715 (Raz). Applicant respectfully traverses this rejection.

The present application was either assigned to or under an obligation of assignment to Network Appliance, Inc. at the time the present invention was made, as evidenced by the assignment document filed in this case on May 10, 2001. Likewise, Kleiman was either assigned to or under an obligation of assignment to Network Appliance, Inc. at the time the present invention was made, as evidenced by the attached copy of a Notice of Recordation of Assignment Document for Kleiman. In this regard, 35 U.S.C. § 103(c) states the following:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

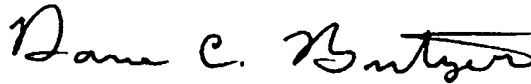
Kleiman was cited under § 102(e). Kleiman does not appear to Applicant to qualify as prior art under § 102(a), (b), (c) or (d). Accordingly, Applicant submits that § 103(c) precludes application of Kleiman as prior art under § 103. Withdrawal of the § 103 rejection is therefore respectfully requested.

Closing

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney can be reached at (614) 486-3585. All correspondence should continue to be directed to the address indicated below.

Respectfully submitted,



Dane C. Butzer
Reg. No. 43,521

Dated: February 17, 2004

Swernofsky Law Group PC
P.O. Box 390013
Mountain View, CA 94039-0013
(650) 947-0700